

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 07-062105

(43)Date of publication of application : 07.03.1995

(51)Int.Cl.

C08G 77/62

(21)Application number : 05-212008

(71)Applicant : TOSHIBA CORP

(22)Date of filing : 27.08.1993

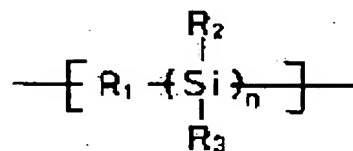
(72)Inventor : HIRAOKA TOSHIRO
NAKANO YOSHIHIKO
MURAI SHINJI
HAYASE SHUJI

(54) FULLERENE-ORGANOSILANE COPOLYMER

(57)Abstract:

PURPOSE: To allow patterning with fullerene's optical functions by producing the title compound, soluble in THF, processable into films, and having the structure of a copolymer of a fullerene and a specific organosilane compound, the optical functions being exhibited by photosensitivity of the film.

CONSTITUTION: A fullerene, such as C60 or C70, and an alkali metal are treated with ultrasonic waves after being dispersed in tetrahydrofuran to be mixed with each other, or treated by constant-potential electrolysis with an electrolyte and platinum electrodes, the electrolyte consisting of methylene chloride as the supporting salt, (C4H9)4NPF6 as the solvent and fullerene, to produce a fullerene anion. A divalent fullerene is preferable. The most preferable fullerene to alkali ratio is 1/2 mol/mol for the former method, and the most preferable potential for the latter method is intermediate between the divalent and trivalent redox potentials. This solution is polymerized with a dihaloorganosilane compound added dropwise, which compound has hydrocarbon groups directly bonded to Si and an Si to hydrocarbon ratio of 1/2, to produce a fullerene-organosilane copolymer represented by the formula wherein R1 represents a fullerene group; R2 and R3 represent each a hydrocarbon group; and n is preferably 1 to 20.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office